

WHO Guidance on Research Methods for Health Emergency and Disaster Risk Management
Chapter 1.3 Historical developments in Health EDRM policy and research: the case study of Japan

Hello, my name is Shinichi Egawa and I am a Professor of disaster medical science at Tohoku University in Japan. I am a co-author of chapter 1.3 in *The WHO Guidance on Research Methods for Health Emergency and Disaster Risk Management*, in which we present Japan as a case study to highlight historical developments in Health EDRM policy and research.

The chapter shows how people in Japan have used scientific research and reflection to cope with disasters and have implemented policies for disaster risk reduction and for building back better.

Japan is in a geographical region with frequent earthquakes, tsunamis, typhoons and torrential rains, and we have had to cope with this by revising policies and introducing new ways to deliver health care. For example, when the Tokyo metropolitan area was hit by a magnitude 8.0 earthquake in 1923, more than 100,000 people lost their lives and, as a consequence, the building code was modified the following year to triple the mechanical safety factor. After World War II, Japan experienced several earthquakes and typhoons that killed thousands of people, leading the Government of Japan to establish the Disaster Countermeasures Basic Act in 1961, which successfully reduced the damage of future hydrological disasters. In 1995, the Great Hanshin Awaji Earthquake revealed weaknesses in the building code and the need for a disaster medical system, leading to the introduction of our national disaster medical system. This includes a Disaster Base Hospital, Disaster Medical Assistance Team, System for Wide Area Transportation and Emergency Medical Information System. More generally, because earthquakes have struck the Tohoku Area every 30-40 years, people have anticipated the possibility of a large earthquake by making houses and buildings seismic proof. Thanks to these improvements in science and technology, many houses and buildings did not collapse during the 2011 Great East Japan Earthquake despite its magnitude of 9.0, saving tens of thousands of lives. However, the massive tsunami that followed the earthquake created a different situation, with many people needing medical assistance for non-communicable diseases, infectious diseases, mental health problems and minor injuries. Fortunately, the need for support for post disaster mental health issues that was strongly recognized after the 1995 Great Hanshin Awaji Earthquake, meant that, in 2011, a number of teams for psychosocial support were ready to enter the affected areas. This was especially important because the damage done to the nuclear power plant worsened the mental health of affected people.

More recent improvements to our national disaster medical systems have focused on unmet medical needs that were identified after the 2011 earthquake. These include the introduction of a Disaster Medical Coordinator and Disaster Psychiatric Assistance Team to support psychiatric hospitals, a hemodialysis network, mother and child health support, the Disaster Health Emergency Assistance Team to support public health, and rehabilitation experts to support older people. We also introduced J-SPEED as the standard daily surveillance system in Japan and it has become the foundation of the current global standard Minimum Data Set for national and international Emergency Medical Teams for data-oriented decision making.

The advanced disaster medical system and resilience against disaster that we have in Japan is not a miracle. It is the result of continuous scientific analysis of disaster risks and damage considering the local contexts of hazards, vulnerabilities and coping capacities and the implementation of relevant policy. Future disasters will have a different context and will impact on a different social structure, including an aging society, and I hope that our chapter will help readers to see that the continuous disaster risk reduction and building back better efforts made by Japan has made us a healthy and resilient society that will be better able to cope with these disasters.

Thank you very much for taking the time to listen to this podcast. If you wish to find out more about this field, the chapter provides much additional information and suggestions for reading.